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U.S.-JAPAN COMPETITION IN MOTOR VEHICLE PARTS

Summary

Motor vehicle parts represent the third-largest U.S. import from Japan, yet they have never attained the high visibility of cars and steel in bilateral trade relations. This could change. The American parts industry, which is going through a period of unprecedented change because of new purchasing policies in Detroit and increased foreign competition in the domestic market, is starting to sound the alarm over Japanese automotive components. Purchases from Japan are increasing, but only partially in response to the expansion of the U.S. replacement parts market for Japanese cars and trucks -- a market American suppliers claim is largely closed to them. Much of the import growth reflects greater outsourcing by Detroit and the start of Japanese vehicle assembly operations in the United States.

An Industry Buffeted by Change

The 2,000 or so U.S. companies manufacturing engines, transmissions, brakes, electrical and lighting equipment, exhaust and suspension systems, body parts and the several thousand other components, accessories and materials that go into a car or truck have been caught in the crosscurrents of change for the last six years. For starters, domestic production of cars and trucks, after hitting a record 12.9 million vehicles in 1978, stumbled in 1979 and then went into a tailspin, plunging to just 6.9 million units in 1982. With at least half and perhaps as much as three-quarters of the output of the motor vehicle parts industry used in the assembly of cars and trucks, the production slump

was a staggering experience for all suppliers of original equipment (OE), especially the huge number of small-scale firms in the business. In a double blow to the industry, demand for replacement or aftermarket parts did not expand as strongly during the 1979-82 sales slide as it had during earlier downturns, even though Americans were holding on to their cars and trucks longer than at any time in the postwar period.

Production of cars and trucks in the United States finally staged a comeback in 1983 and rebounded again this year to an estimated 11.2 million vehicles. While the recovery has brought much-needed OE contracts to struggling automotive parts manufacturers, business has still not returned to the boom levels of the late 1970s -- and might never, suppliers increasingly suspect, stranding them only three-fourths of the way back. At the same time, parts producers, whether independents or in-house suppliers to General Motors Corp., Ford Motor Co., Chrysler Corp. and American Motors Corp., have had to grapple with a new way of doing business in Detroit.

The Big Four U.S. motor vehicle makers are imposing more stringent quality and performance standards on production parts vendors, aware that the success of their drive to improve the international competitiveness of American cars and trucks hinges to a significant degree on better quality control by suppliers. Parts producers are also being told to hold the line on price increases or even to grant price concessions. They are being forced as well to adapt their production and delivery schedules as domestic car and truck manufacturers try to introduce "just-in-time" inventory control to final assembly operations. In addition, automotive companies are looking to their suppliers for more input in the new product design and development process.

Over time, Detroit's stiffer supplier requirements could thin the ranks of domestic OE parts producers far more than the 1979-82 slump did. Companies passing the test, though, stand an increasing chance of winning multi-year single-source contracts since the Big Four are starting to move away from their traditional annual agreements with several suppliers to build the same part. Successful independents could also benefit from another change in the parts procurement policies of U.S. motor vehicle makers: greater sourcing from outside suppliers, particularly firms with lower cost structures than those prevailing in the auto industry.

The new business environment in which American parts manufacturers operate has another dimension, and this one -- increased foreign competition in the domestic marketplace -- is generating perhaps the most difficult adjustments in the industry. Suppliers feel threatened on all sides. The lucrative and fast-growing U.S. market for replacement parts for Japanese-made cars and trucks is, by and large, dominated by their Japanese rivals, complain American companies producing for the aftermarket. They are also discovering that greater outsourcing of production parts by Detroit is a mixed blessing as the Big Four bring in more parts, including powertrain components, from affiliates in Japan and elsewhere as well as from unrelated foreign suppliers.

U.S. parts makers are quick to add that, with the exception of Canada, export markets provide few offsets for the greater import challenge they face in the United States. Japanese motor vehicle manufacturers, they argue, are

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only willing to buy a limited number of American-made OE parts for cars and trucks shipped to this country, while American automotive companies with offshore assembly operations manufacture many of the parts they need in the countries where cars and trucks are turned out. Domestic producers also claim that Japanese motor vehicle makers with U.S. assembly facilities have not sourced as many of their production parts requirements from local suppliers as they could, opting instead to import components from Japan or give their business to Japanese parts manufacturers that have followed them to the United States.

While this is certainly a biased recitation of the trade problems affecting the competitive status of the American motor vehicle parts industry, one fact is inescapable: the United States, a net exporter through 1982, is now running a substantial trade deficit in automotive parts that shows no signs of reversing itself (see Table 1). Japan's role in this complex development will be explored in this report in the hope that the various issues can at least be untangled.

Parts for Japanese Vehicles: A Closed Market?

Charges of limited U.S. access to the market for Japanese car and truck parts, whether for assembly or replacement, are not new. The issue has been around since late in the 1970s, when trade negotiators for the two countries first started looking for ways to defuse the pressure then building in the United States for legislation restricting the market inroads of Japanese cars. One obvious answer, Carter administration officials concluded, would be for Tokyo to improve access for exports of U.S. automotive parts, which totaled just $79 million in 1979 compared with deliveries here of over $1 billion worth of Japanese parts, as well as encourage motor vehicle makers in Japan to use more American-made components. Washington also suggested that the Japanese government take steps to facilitate car imports from the United States and promote U.S. manufacturing investments by the Japanese automotive industry and its parts suppliers.

Following six months of negotiations, Tokyo unveiled an automotive trade package in May 1980 that included initiatives in each of these areas. Under prodding from the Department of Commerce, Japanese car and truck manufacturers subsequently projected that their OE parts purchases from the United States would total $120 million in 1980 and hit $300 million the next year, after which, government officials promised, the industry would "make every effort" to boost imports further. Whatever skepticism U.S. parts makers harbored about the depth of Japanese interest in sourcing more components from this country, they were willing to try to expand sales of production parts, if only because Japanese manufacturers insisted that the best way to crack the American market for replacement parts -- the primary target of domestic suppliers -- was to first win OE contracts.

Even with good-faith efforts on both sides, the OE parts purchasing program had little chance for success since not enough time was available to forge new supplier relationships. Japanese motor vehicle manufacturers maintain that it generally takes one to three years after discussions are initiated with any potential supplier for a contract to be signed; since most companies in the U.S. parts industry are small-scale firms inexperienced in exporting, they add, the upper limit becomes the norm. Time was not the only

problem, though. Quotes on most U.S. products were 10 to 20 percent above Japanese prices even before the dollar started gaining ground on the yen, reported purchasing managers, who noted as well that warranty periods for American parts were often shorter than for comparable Japanese components and defect compensation ranges more limited. Quality control itself was a problem, as was scheduling of deliveries.

U.S. parts exports did increase -- and continue to do so (see Table 2) in the face of a slowdown in sales to other major export markets, but few people outside the industry and the Commerce Department noticed that Japan's purchases fell far short of its 1981 goal. The reason was simple. Soon after taking office, the new Reagan administration decided that neither greater automotive product sales to Japan nor Japanese motor vehicle industry investments in this country would derail the drive on Capitol Hill for stiff import quotas on Japanese cars or domestic content legislation; only self-imposed restrictions by Tokyo on U.S.-bound car shipments would douse the protectionist fires in the United States and give American car makers breathing room to retool for the new era of small car competition. Washington consequently threw all its negotiating energy into persuading the Japanese government to limit car exports -- a goal it achieved in the spring of 1981, and the parts issue was relegated to the back burner.

Undeterred, the U.S. parts industry continued to work behind the scenes on the issue of primary concern to it all along: better access to the domestic aftermarket for Japanese cars and trucks. This persistence has started to pay off in terms of renewed Commerce Department interest, but the nature and scope of the problem remain as murky as ever, in part because of a dearth of hard data. Estimates of the size of the total U.S. automotive aftermarket vary wildly, as do figures on the role of various service and sales outlets (franchised new car dealerships, automotive repair shops, service stations, mass merchandisers, and tire, battery and accessory dealers). Equally big disparities also characterize the few available estimates of the extent and organization of the market for replacement parts for Japanese vehicles. Import statistics provide little guide since not all incoming parts are destined for the aftermarket and Japan is not the only foreign source of replacement parts for Japanese cars and trucks.

The U.S. industry has also confused the issue. When parts suppliers voice frustration about their inability to sell in the aftermarket for Japanese vehicles, they are really talking about the problems of gaining access to one distribution channel -- Japanese automotive makers' dealer networks. At most, it appears, these service facilities handle only 50 percent of all replacement parts sales, leaving at least half of the market accessible to American vendors. As even they acknowledge, the roughly 13.5 million Japanese cars and pickup trucks retailed in the United States since 1978 make this nondealer segment an enormous market for replacement parts, particularly for high turnover items like batteries, tires, spark plugs, filters, belts, tailpipes, mufflers and brake parts.

Having said this, it must also be noted that with the possible exception of products loosely categorized as accessories, American producers have had difficulties selling parts to Japanese car and truck dealers in the United States, especially major mechanical components, which continue to be imported

from Japan. Japanese automotive manufacturers concede as much, but say the problem centers on the capability of domestic suppliers to meet their aftermarket requirements in terms of quality, price and availability. How can an American maker hope to match the cost structure of a Japanese company that is a primary supplier of a volume part, they ask for example.

U.S. parts suppliers, not surprisingly, take issue with this characterization of the problem. To them, it is a clear-cut case of impeded market access. Stopping short of accusing Japanese automotive makers of violating antitrust laws by telling their dealers what companies to buy from, domestic parts producers maintain that the manufacturers have an unusually strong influence on the replacement parts purchasing policies of Japanese car dealers in this country. They also complain that it is hard for American competitors to get their parts certified for use by dealers, largely because Japanese motor vehicle firms do not make available the performance requirements for their parts and frequently change the specifications without notification.

The domestic parts industry and Japanese automotive manufacturers have gone round and round on the question of access to the service operations of Japanese car dealerships since at least 1980, but the divisions remain as deep as ever. The debate, obviously, is not just academic. The steadily rising number of Japanese cars and pickup trucks on American roads and their increasing age signal a major expansion in the size of the aftermarket for these vehicles. Which distribution channels owners use for repair work and replacement parts purchases and what manufacturers supply them will determine, at a minimum, whether already-large U.S. imports of Japanese-made replacement parts continue to grow or taper off. In the absence of accurate market share information, however, the stalemated debate over the openness of the American aftermarket for Japanese vehicles will run on, straining bilateral automotive trade relations.

Detroit Goes Offshore for Parts

While replacement parts still account for the majority of motor vehicle parts imported from Japan (see Table 3), production parts purchased by General Motors, Ford and Chrysler were perhaps the fastest-growing imports during the 1979-83 period. This expansion, duplicated in the trade data for Mexico and Brazil, represents one Big Three response to the realities of the U.S. small car business -- realities that include not just stiff Japanese competition but also big swings in domestic demand for American-built subcompacts. Instead of tying up resources trying to design, develop and manufacture in-house the major mechanical components for their small car models, the three companies have turned to their Japanese affiliates for certain requirements.

Powertrain products head the list of original equipment items. General Motors has gone to Isuzu Motors, Ltd. for five-speed manual transaxles for its American-made compact J cars (Chevrolet Cavalier, Pontiac Sunbird, Oldsmobile Firenza, Buick Skyhawk and Cadillac Cimarron), as well as four-cylinder diesel engines for the Chevrolet Chevette. Ford's purchases from Mazda Motor Corp. (formerly Toyo Kogyo Co., Ltd.) include four-speed manual transaxles for domestically built Escorts and Lynxs, five-speed manual and automatic transaxles for compact Tempos and Topazs, and 2.0-liter four-cylinder diesel

engines. For its part, Chrysler sources 2.6-liter four-cylinder engines from Mitsubishi Motors Corp. for its minivans and intermediates.

These Japanese companies are not the only Big Three affiliates tapped for powertrain products; each maker also brings in engines and/or transmissions from subsidiaries in Latin America and Europe. Moreover, powertrain products are just the biggest-ticket items on a long list of production parts sourced from both affiliated and unrelated firms in Japan. A sampling includes starter motors, alternators, clutches, engine mounts, hollow stabilizers, ball joints, stampings and electronic engine control devices.

Detroit's continued search for suppliers that can provide high-quality, technically sophisticated products at prices below its own production costs will undoubtedly translate into greater purchases of automotive parts from Japan, especially if the dollar remains as strong as it has been over the past three years. Japanese makers can meet the Big Three's minimun cost-savings requirements for outsourcing to Japan (reportedly 15 percent) on a wide range of parts. Some industry analysts estimate in fact that many Japanese parts are priced 30 to 40 percent below comparable products manufactured in the United States, although part of this savings is erased by transportation charges and customs duties.

As disturbing as greater outsourcing to Japan and other foreign countries is to U.S. automotive parts suppliers, both independent and captive, far more troublesome is the likelihood that General Motors, Ford and Chrysler will increasingly depend on imports for their small car offerings. Over the past year, GM has started buying a subcompact from Isuzu (Chevrolet Spectrum) and a mini car (Chevrolet Sprint) from its other Japanese affiliate, Suzuki Motor Co., Ltd. While volume has so far been limited because of the ceiling on Japan's car exports to the United States, the industry giant hopes to be able to import 300,000 units annually, perhaps as soon as next year. It also plans to begin sourcing a small car from a Korean manufacturer in 1987, the same year Ford's new Mexican-built subcompacts are expected to appear in dealer showrooms. Chrysler is also said to be considering a Korean import, which would supplement the 130,000 or so subcompacts it sources each year from Mitsubishi Motors. For domestic parts producers, deals such as these and others rumored to be in the works mean only one thing: less business.

Japanese Makers Come Onshore

While American automotive manufacturers are going offshore for both parts and vehicles, Japanese motor vehicle makers are expanding their U.S. assembly operations. Heading the by-now familiar roster is Honda Motor Co., Ltd., which has been manufacturing Accords at an annual rate of 150,000 units since late May at its Marysville, Ohio plant, opened in November 1982. Honda of America Manufacturing Inc. is now in the process of doubling capacity so that Civic production can be added in the second half of 1986. By 1987, Nissan Motor Manufacturing Corp. U.S.A. expects to be assembling 140,000 compact pickup trucks and 100,000 cars a year at its Smyrna, Tennessee factory. The plant, which went into operation in June 1983, is currently making pickups at an annual rate of 120,000 units and is being readied to start assembly next April of Nissan Motor Co., Ltd.'s Sentra subcompact.

Earlier this month, New United Motor Manufacturing Inc. (NUMMI), the joint venture between Toyota Motor Corp. and General Motors, began trial production of a Toyota-designed subcompact, to be sold in the United States under the Chevrolet Nova name. By mid-1986, the Fremont, California-based company expects to be turning out 200,000 cars annually. Roughly a year later, Mazda will become the fourth Japanese automotive maker with a U.S. assembly plant. The Ford affiliate recently announced plans to build a factory in Flat Rock, Michigan with the capacity to manufacture 240,000 cars a year in full production.

The Honda cars and Nissan trucks now being assembled in the United States contain over 50 percent local content (measured according to proposed domestic content legislation), which is also the target for NUMMI's cars when its plant reaches full production. Each company makes its own body stampings, turning out side panels, doors, fenders, hoods, truck lids, roof panels and a variety of other parts; Honda, in addition, manufactures in-house many of the Accord's molded plastic parts, including instrument panels, dashboards, bumpers and radiator grilles. Outside domestic suppliers provide a common long list of production parts and materials to the three manufacturers, ranging from steel, glass, paint, wheels, tires, batteries, headlights, seats and carpeting, down to smaller items such as plastic trim and sealants.

For Honda, which has more than 40 U.S. suppliers, these purchases add up to roughly $220 million a year, while Nissan's annual purchases from its 88 American suppliers are currently running around $144 million. Comparable data are not available for NUMMI since it is still signing up suppliers, but the joint venture expects to buy parts from about 70 domestic companies, including a number of GM divisions.

The major components sourced from Japan are engines, transmissions and differentials or transaxles -- powertrain products the three companies say they cannot cost effectively manufacture here at current or near-term production levels. (Honda, however, is studying the possibility of building a car engine plant.) These purchases produced a bulge in U.S. parts imports from Japan in both 1983 and this year, and they will continue to do so as Honda, Nissan and GM-Toyota expand output and Mazda gears up its planned factory. At the same time, though, a number of production parts now brought in from Japan will be replaced by domestically sourced products as the companies, which are, after all, still new to the U.S. manufacturing scene, identify additional American suppliers that meet their quality, price and delivery requirements.

This prospect is all but ignored by American parts producers, which have been quick to lash out at the domestic content of Honda, Nissan and NUMMI vehicles. Their harshest criticism, however, is reserved for the fact that the three companies buy components from some of the 27 U.S. manufacturing plants set up by Japanese automotive parts manufacturers (see Table 4). It seems to make no difference to the critics that Japanese-affiliated U.S. parts suppliers represent a minority of the trio's domestic suppliers (five of Honda's and six of Nissan's) or that these firms are creating jobs in the United States that might have remained in Japan if Honda, Nissan or GM-Toyota had opted instead to import the relevant parts.

What really worries American parts makers, it appears, is the possibility that Japanese rivals that begin manufacturing here to supply one of the Japanese vehicle assembly operations will start to go after U.S. Big Three contracts. While this concern is understandable, criticism of the current production parts purchasing policies of Honda, Nissan and GM-Toyota is not. Over time, OE contracts with these companies and later with Mazda could give domestic manufacturers their best chance to break into the dealer-controlled replacement parts market for Japanese cars and trucks.

For further information, contact Susan MacKnight.

The views expressed in this report are those of the author and do not necessarily represent those of the Japan Economic Institute.

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JEI Report will not be published on December 28 or January 4 because of the Christmas and New Year's holidays. The next issue will appear January 11, 1985.

Table 1: U.S. Trade in Motor Vehicle Parts and Accessories, 1980-84

(in thousands of dollars; exports f.a.s. value, imports Customs value basis)

	1980	1981	1982	1983	Nine Months 1983	Nine Months 1984
Overall Trade Balance						
Total Exports	$9,307,157	$11,261,660	$10,641,745	$11,045,088	$8,007,373	$10,377,556
Total Imports	9,025,010	8,447,409	9,112,226	12,597,206	8,828,783	12,792,906
Trade Balance	282,147	2,814,251	1,529,519	-1,552,118	-821,410	-2,415,350
U.S.-Japan Trade Balance						
Exports to Japan	105,209	118,991	127,847	148,368	104,277	130,659
Imports from Japan	2,828,725	1,821,699	1,822,344	2,112,954	1,489,535	2,247,708
Trade Balance	-2,723,516	-1,702,708	-1,694,497	-1,964,586	-1,385,258	-2,117,049
Major Export Markets						
Canada	5,119,372	6,194,440	6,382,881	7,722,027	5,538,512	7,321,913
Mexico	1,377,352	1,904,878	1,115,443	764,725	534,746	963,077
Venezuela	392,010	536,269	524,329	278,384	210,111	305,501
West Germany	156,795	221,238	226,741	219,880	166,099	177,228
United Kingdom	190,198	210,359	196,209	200,293	149,534	172,562
Australia	209,274	237,944	223,673	153,499	113,571	168,312
Saudi Arabia	158,770	223,230	266,011	225,365	180,717	157,585
Japan	105,209	118,991	127,847	148,368	104,277	130,659
Belgium	140,547	115,108	135,357	124,750	85,479	72,230
France	n.a.	n.a.	118,764	92,096	68,701	70,831
Major Import Suppliers						
Canada	3,379,057	3,896,053	4,524,980	6,568,970	4,612,220	6,530,904
Japan	2,828,725	1,821,699	1,822,344	2,112,954	1,489,535	2,247,708
Mexico	310,339	418,957	648,003	1,207,665	814,478	1,150,043
West Germany	797,327	586,035	506,679	631,396	452,423	647,417
Brazil	222,706	247,426	310,457	424,085	283,781	452,347
France	453,734	390,211	294,501	323,594	232,791	345,928
United Kingdom	299,852	260,871	189,526	232,457	166,099	271,738
Korea	120,313	163,625	189,234	254,088	178,305	254,619
Taiwan	110,084	118,120	133,820	248,446	175,694	247,202
Italy	140,098	147,523	123,524	130,708	98,891	138,249

Source: U.S. International Trade Commission, unpublished data

Table 2: U.S. Exports of Motor Vehicle Parts and Accessories to Japan, 1979-84

(in thousands of dollars, f.a.s. value basis)

	1979	1980	1981	1982	1983	Nine Months 1983	Nine Months 1984
Total	n.a.	$105,209	$118,991	$127,847	$148,368	$104,277	$130,659
Bodies	$344	0	350	260	266	200	135
Chassis	466	1,074	106	106	84	0	79
Axles	n.a.	n.a.	438	1,025	9,696	7,824	1,549
Body Stampings	255	284	107	124	93	67	229
Bumpers	215	83	162	0	0	0	52
Wheels	850	962	620	1,196	1,107	1,044	812
Hubcaps and Wheel Covers	97	71	227	0	0	0	19
Radiators	208	77	366	319	277	0	61
Mufflers and Tailpipes	111	108	0	0	0	0	220
Brakes and Parts	3,506	4,545	4,275	3,832	4,487	3,193	5,402
Shock Absorbers	428	617	678	510	793	486	823
Transmissions	15,047	17,955	17,301	16,316	18,775	13,580	16,115
Parts Not Listed Above	27,751	33,678	32,179	31,678	33,585	22,671	52,586
Engines	231	469	1,354	1,191	1,350	556	2,365
Engine Parts	4,852	18,704	26,873	32,479	38,036	26,195	22,710
Ignition Wiring Sets*	425	554	698	696	640	230	546
Starter Motors	101	105	189	487	505	323	259
Spark Plugs	1,060	1,149	760	920	618	298	511
Points	0	0	0	0	0	0	8
Battery Chargers	189	141	214	245	117	0	343
Lead-Acid Storage Batteries*	776	1,067	1,488	1,513	2,007	1,434	1,808
Voltage Regulators*	65	93	137	112	82	54	127
Other Starting and Ignition Equipment	852	906	587	900	631	457	568
Lighting Equipment	458	350	395	507	272	199	212
Sealed Beams	1,561	2,326	2,592	4,186	4,314	3,334	2,902
Signaling Equipment	210	417	0	0	0	0	45
Pumps	252	857	552	243	156	112	242
Fans and Blowers	0	0	73	0	70	70	5
Air Conditioners	3,398	3,126	2,965	1,040	1,114	877	451
Air Conditioner Compressors	n.a.	n.a.	n.a.	91	115	88	67
Springs and Leaves	0	0	0	0	0	0	8
Hinges and Other Hardware	719	610	529	575	658	433	522
Locks	0	0	0	0	0	0	3
Furniture*	1,301	603	2,179	2,729	1,196	1,002	1,709
Tempered Glass	179	350	138	120	81	65	86
Laminated Glass	0	1,091	3,096	3,530	5,226	3,203	6,387
Mirror Glass	0	0	0	0	0	0	17
Radios	457	839	0	139	123	77	377
Tires	8,047	6,147	11,039	12,295	11,034	8,339	6,167

*Not all necessarily for motor vehicles.

Source: U.S. Department of Commerce, Bureau of the Census, U.S. Exports: Schedule E Commodity by Country (FT 410)

Table 3: U.S. Imports of Motor Vehicle Parts and Accessories from Japan, 1979-84

(in thousands of dollars, Customs value basis)

	1979	1980	1981	1982	1983	Nine Months 1983	Nine Months 1984
Total	n.a.	$2,828,725	$1,821,699	$1,822,344	$2,112,954	$1,489,535	$2,247,708
Compact Truck Bodies (incl. cabs)	$123,209	206,923	31,339	20,291	9,296	7,977	11,982
Other Bodies	796	2,989	0	674	302	68	20,661
Compact Truck Chassis	1,286,627	1,237,310	0	0	0	0	564
Other Chassis	3,133	7,248	0	1,235	4,001	2,285	7,201
Body Stampings	48,885	55,178	67,544	69,235	69,689	50,914	69,480
Bumpers	15,743	14,678	16,307	18,127	18,885	13,836	22,840
Axle Spindles	0	0	0	5,771	703	208	16,166
Wheels	5,817	5,710	7,614	7,935	15,204	8,951	19,539
Hubcaps and Wheel Covers	1,412	1,075	1,993	980	1,873	1,148	2,378
Radiators	3,001	2,992	3,770	4,754	4,446	2,779	7,705
Mufflers and Tailpipes	15,006	10,669	10,561	9,569	17,322	12,081	12,853
Brakes and Parts	15,489	18,882	25,263	25,332	31,466	22,515	31,073
Shock Absorbers	6,283	6,844	11,152	12,199	15,538	11,026	16,708
Transmissions	29,313	36,405	44,513	81,671	122,957	86,678	96,797
Parts Not Listed Above	213,983	197,217	268,536	274,069	356,917	241,067	458,064
Diesel Engines	18,086	9,511	31,945	22,845	12,448	9,674	18,316
Gasoline Engines	2,105	87,788	106,598	116,795	66,460	40,539	103,202
Engine Parts	139,406	118,455	142,331	107,331	117,559	88,645	116,513
Ignition Wiring Sets*	2,525	2,890	3,312	4,331	6,486	3,470	9,105
Starter Motors	16,950	16,459	23,571	19,486	25,958	18,151	28,280
Spark Plugs	13,461	16,216	13,674	15,638	18,164	13,429	18,278
Points	4,728	4,625	3,637	2,392	2,449	1,895	2,085
Battery Chargers	7,184	7,158	8,424	8,486	10,468	6,809	13,479
Lead-Acid Storage Batteries*	15,107	12,736	11,372	12,786	14,751	10,620	14,474
Voltage Regulators*	3,483	3,216	4,218	4,588	4,693	3,529	6,464
Other Starting and Ignition Equipment	23,140	26,313	27,081	25,440	31,100	21,455	35,902
Speedometers and Tachometers*	15,277	11,303	13,733	11,069	14,934	10,385	18,126
Lighting Equipment	27,013	25,796	26,136	28,646	34,176	25,049	33,137
Sealed Beams	1,568	2,030	1,412	1,075	904	689	668
Pumps	14,100	15,156	20,754	16,610	22,608	15,913	26,150
Fans and Blowers	2,361	3,992	4,746	10,735	4,491	3,523	4,632
Air Conditioners and Parts	n.a.	n.a.	n.a.	n.a.	51,207	35,890	50,826
Air Conditioner Compressors	n.a.	n.a.	n.a.	39,464	70,610	46,400	77,836
Springs and Leaves	9,945	4,699	6,435	4,707	9,292	5,535	12,680
Hinges	4,604	6,899	8,238	9,464	14,315	9,480	19,438
Locks	2,041	2,627	2,860	3,237	3,318	2,283	3,959
Furniture	5,389	6,384	7,794	9,743	11,189	6,891	13,030
Tempered Glass*	4,152	6,936	7,117	8,070	8,271	6,245	10,774
Laminated Glass	1,652	2,479	2,584	2,788	3,554	2,544	5,128
Radios	42,864	45,483	36,442	34,387	27,769	19,167	30,545
Radio-CB Combinations	2,828	1,911	300	173	268	219	104
Tape Players	34,276	27,691	50,977	48,415	61,934	45,934	43,777
Radio-Tape Player Combinations	328,774	288,476	384,959	341,324	356,472	261,861	343,398
Tires	159,126	214,345	302,805	309,985	343,026	241,608	322,673

*Not all necessarily for motor vehicles.

Source: U.S. Department of Commerce, Bureau of the Census, U.S. Imports for Consumption and General Imports (FT 246)

Table 4: U.S. Production of Motor Vehicle Parts and Accessories by Japanese-Affiliated Companies

Company	Parent	Share	Plant Location	Year Operational	Product Line	Comments
Bellemar Parts Industries Inc.	Honda Motor Co., Ltd. Sankei Giken Kogyo Co., Ltd. Tokyo Seat Co., Ltd.	80 10 10	Marysville, OH	1982	Seat assemblies, exhaust systems, catalytic converters, brake lines, wheels and door sashes	Honda of America Mfg. Inc. supplier. Building new plant in Russells Point, Ohio. When factory completed in mid-1985, production of exhaust systems, catalytic converters, brake lines and door sashes will be transferred from Marysville facility.
Bridgestone Tire Manufacturing (U.S.A.), Inc.	Bridgestone Corp.	100	LaVergne, TN	1982	Radial tires for heavy-duty trucks and buses	Sells primarily in replacement market. Been manufacturing tires for sale under Bridgestone name since March 1984 in addition to making tires for Firestone Tire & Rubber Co. Production of car tires under consideration.
Calsonic, Inc.	Nihon Radiator Co., Ltd.	100	Irvine, CA	1976	Air conditioning systems	OE for vehicles sold through Nissan Motor Corp. U.S.A.
Calsonic Manufacturing Corp.	Nihon Radiator Co., Ltd.	100	Shelbyville, TN	1983	Air conditioning systems and exhaust assemblies	OE supplier to Nissan Motor Mfg. Corp. U.S.A.
Cast Forge Co.	Nippon Light Metal Co., Ltd. Kelsey-Hayes Co.	20 80	Howell, MI	1982	Aluminum wheels, transmission component parts and engine parts	Output goes to OE makers.
Clarion Corp. of America	Clarion Co., Ltd.	100	Lawndale, CA Nashville, TN	1971 1983	Radio combinations	Supplying Chrysler Corp. and Nissan Motor Mfg. Corp. U.S.A. on OE basis. Also sells to automotive dealers and in replacement market.
*Curtis-Maruyasu America, Inc.	Maruyasu Industries Co., Ltd. Curtis Products, Inc.	50 50	Tracy, CA	1985	Fuel line and hydraulic brake assemblies	Will be OE supplier to New United Motor Mfg. Inc. Plant completed but will not be operational until 1985.
*Eaton Auto Products Manufacturing Inc.	Nihon Plast Co., Ltd.	100	Eaton, OH	1985	Steering wheels	Will be OE supplier to Honda of America Mfg. Inc. Also hopes to win contracts from Nissan Motor Mfg. Corp. U.S.A. and U.S. Big Three auto makers.
Fuji Koki America Inc.	Fuji Koki Mfg. Co., Ltd.	100	Dallas, TX	1982	Expansion valves for air conditioning systems	OE supplier to U.S. manufacturing affiliates of Japanese companies as well as American producers. Originally set up as joint venture with Virginia Chemicals Inc. and called Pace Products Inc. Fuji Koki became sole owner spring 1984. New plant opened June 1984.

Company	Parent	Share	Plant Location	Year Operational	Product Line	Comments
Hi-Lex Corp.	Nippon Cable System, Inc.	100	Battle Creek, MI	1978	Control cables for accelerators, clutches, hood and trunk release mechanisms, gas filler lids and brakes	Has OEM contracts with General Motors Corp., Ford Motor Co., Chrysler Corp., International Harvester Co. and Nissan Motor Mfg. Corp. U.S.A. Some output also goes to replacement market. Doubled production capacity spring 1984 and again fall 1984.
Izumi Corp.	Izumi Motor Co., Ltd.	100	Yaphank, NY	1979	Steering wheels and horn pad assemblies	OE supplier to Ford Motor Co., Chrysler Corp. and Nissan Motor Mfg. Corp. U.S.A. Volume quadrupled in 1984. Expects to start construction July 1985 of urethane manufacturing facility that will allow company to expand product line.
*KTH Parts Industries Inc.	Kikuchi Press Kogyo Co., Ltd. Takao Kinzoku Kogyo Co., Ltd. Hirata Press Kogyo Co., Ltd. Hongo Seisakusho Co., Ltd.	n.a. n.a. n.a. n.a.	St. Paris, OH	1985	Stamped and welded internal structural components	Output will go exclusively to Honda of America Mfg. Inc. Plant expected to be operational fall 1985.
*Kantus Corp.	Kanto Seiki Co., Ltd.	100	Lewisburg, TN	1985	Plastic instrument panels, radiator grilles, console boxes and front bumpers	Will be OE supplier to Nissan Motor Mfg. Corp. U.S.A. Plant expected to be operational mid-1985.
*Musashi USA Inc.	Musashi Precision Industry Co., Ltd.	100	Battle Creek, MI	1985	Arm bushing and joint assemblies	All of output will go to Ford Motor Co. under OE contract after plant goes in operation in spring 1985.
NGK Spark Plug Mfg. (U.S.A.), Inc.	NGK Spark Plug Co., Ltd.	100	Irvine, CA	1977	Spark plugs	Output goes into replacement market for Japanese-made cars and compact pickups. Moved operations from Van Nuys to Irvine in spring 1983.
NOK Inc.	Nippon Oil Seal Industry Co., Ltd.	100	LaGrange, GA	1980	Oil and mechanical seals	Has OE contracts with General Motors Corp., Ford Motor Co., Chrysler Corp., American Motors Corp. and International Harvester Co. Also supplies replacement market. Plant capacity being doubled.
Nippondenso of Los Angeles Inc.	Nippondenso Co., Ltd.	100	Long Beach, CA	1971	Air conditioning systems	Has OE contract with New United Motor Mfg. Inc. Continues to make systems for Toyota Motor Corp. and Honda Motor Co., Ltd. vehicles sold here. Also remanufactures starters and alternators. Recently moved production from Carson to new plant in Long Beach.

Company	Parent	Share	Plant Location	Year Operational	Product Line	Comments
Nippondenso Sales Inc.	Nippondenso Co., Ltd.	100	Battle Creek, MI	1983	Windshield washers and heaters	Output goes to Honda of America Mfg. Inc. Will start construction in March 1985 of new plant in Battle Creek for production of heat exchangers, condensers and evaporators for AC systems. New facility expected to be operational mid-1986.
North American Lighting Inc.	Koito Manufacturing Co., Ltd. Westfalische Metall Industrie AG	49 51	Flora, IL	1983	Front and park lamps, rear combination lamp assemblies, fog lamps and license-plate lamps	OE supplier to Nissan Motor Mfg. Corp. U.S.A., BMW of North America Inc., Volkswagen of America, Inc., Ford Motor Co., General Motors Corp., Chrysler Corp. and American Motors Corp. Just opened new production facility. Will add high-mounted stop lamps to line in spring 1985.
Sanden International (USA), Inc.	Sanden Corp.	100	Dallas, TX	1980	Air conditioner compressors	Sells in both OE market and aftermarket to both American manufacturers and U.S. manufacturing affiliates of Japanese companies. Plans to add evaporator coils to production line in 1985.
Stanley Electric U.S. Co., Inc.	Stanley Electric Co., Ltd.	100	London, OH	1982	Front and rear combination lamp assemblies	OE supplier to Honda of America Mfg. Inc.
Toyota Motor Mfg., U.S.A., Inc.	Toyota Motor Corp.	100	Long Beach, CA	1974	Cargo beds for pickup trucks	OE supplier to Toyota Motor Sales U.S.A. Inc. Beds shipped to eight Toyota port facilities around United States where they are mounted on imported cab-chassis units. Plant recently turned out one millionth bed.
Tri-Con Industries, Ltd.	Tokyo Seat Co., Ltd.	100	Columbia, MO	1983	Car seats	Has OE contract with Chrysler Corp. Also has car seat sewing plant in Cape Girardeau. Expects to open new plant in Lincoln, Nebraska spring 1985 to stamp frames for car seats.
Viam Manufacturing Inc.	Japan Vilene Co., Ltd. Dainippon Ink & Chemicals Inc.	60 40	Santa Fe Springs, CA	1984	Floor mats	Sold in both OE and replacement markets.
*Warner-Ishi Corp.	Ishikawajima-Harima Heavy Industries Co., Ltd. Borg-Warner Corp.	50 50	Shelbyville, IL	1985	Turbocharger housings	OE and aftermarket supplier.
Wynn-Kiki Inc.	Diesel Kiki Co., Ltd. Wynn Industries, Inc.	50 50	Fort Worth, TX	1984	Air conditioner compressors	Sells primarily in OE market to both American manufacturers and U.S. manufacturing affiliates of Japanese companies. Some sales of replacement parts. Plans to add evaporators to production line in 1985.

*Under construction